95-P-97178/3 Altering the Medicare Economic Index: Specialty-Specific Indices and Fee Floors Appendix VII

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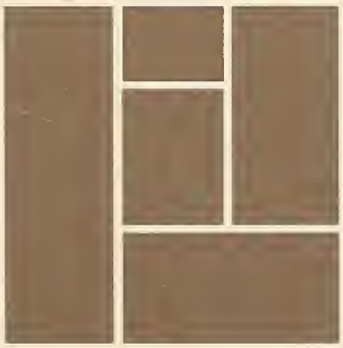
Margaret B. Sulvetta



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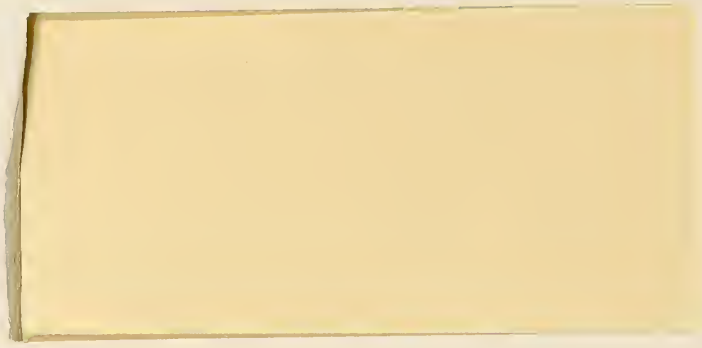

Appendix VII

Altering the Medicare Economic Index: Specialty-Specific Indices and Fee Floors

Margaret B. Sulvetta

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ECONOMIC INDEX ADJUSTMENTS

This section describes the analyses which centered upon alternative methods of calculating the Medicare Economic Index (MEI). Two such analyses were performed. The first involved development of a specialty-based economic index, and the second involved setting percentile floors for indexed prevailings. Description of these tasks is preceded by a discussion of the MEI.

The Medicare Economic Index*

Prior to development of the MEI, calculation of the Medicare reasonable amount was set as the minimum of: (1) the billed charge; (2) the customary charge for the individual procedure and billing physician; and (3) the prevailing charge for that procedure among comparable physicians in the locality.** The reimbursements for a given screen year (July 1 - June 30) are based on charges for the preceding calendar year. Thus the level of charges in any given current year determine the level of reimbursement in the following year, and therefore create an incentive to keep billed charges high. The MEI was developed to control rising physician fees by constrainig the annual increase in prevailing charges.

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*For a thorough discussion of the MEI, see: Benson L. Dutton Jr. and Peter McMenamin, "The Medicare Economic Index: Its Background and Beginnings," Health Care Financing Review, September 1981, pp. 137-140. Much of the material in this section has been taken from that article.

**The customary charge is the median charge for a given physician/procedure while the prevailing charge is defined as the 75th percentile of all customary charges for a given procedure within a certain locality, and generally within a physician specialty.

It was designed to allow an annual increase in prevailing charges reflective of changes in physicians' earnings and operating expenses. Fee screen year 1973 (July 1972 - June 1973) was selected as the base year; indexed prevailings were calculated by multiplying FSY 1973 prevailings by the value of the MEI. The index became effective on July 1, 1975 (the beginning of FSY 1976) and from that point on, the Medicare reasonable amount was determined as the minimum of (1) the billed charge; (2) the customary charge; and (3) the lesser of the unadjusted and the adjusted (i.e., "indexed") prevailing charge.

The MEI, as noted above, consists of two components, one reflecting physician practice costs, and the other reflecting physicians' earnings. As currently calculated, the practice cost portion contains six components: (1) salaries and wages; (2) office rental costs; (3) drugs and supplies; (4) automobile expenses; (5) malpractice insurance premiums; and (6) other expenses. Each of these components is assigned a specific weight. Combined, these components are assigned a weight of 40, while physician income is assigned a weight of 60, reflecting the average division of physician gross revenues between practice costs and net income. Tables 1 and 2 present the Economic Index Component Values and the increase values of the components.

Recent annual revisions of the MEI have been based on surveys of physician practice costs and incomes. However, the annual changes in costs and earnings have reflected changes averaged across a national sample of physicians. As with any average, actual realized costs and incomes will exceed the average in some cases, and fall below the average in others, so that the annual MEI increase will not represent the cost and income experience of many physicians. The purpose of developing a specialty-based index was to determine if, in fact, costs and incomes do vary significantly across specialties,

Table 1[a]

Medicare Economic Index

	FSY 1976[b]	FSY 1977[c]	FSY 1978[d]	FSY 1979	FSY 1980	FSY 1981[e]	FSY 1982[f]
1. Physician Employees Index Weight	.1480	.1480	.1720	.1720	.1720	.1760	.1720
2. Rental Cost Index Weight	.0560	.0600	.0400	.0400	.0400	.0880	.1000
3. Auto Expenses Index Weight	.0240	.0280	.0200	.0200	.0200	.0240	.0280
4. Supplies Index Weight	.0360	.0360	.0320	.0320	.0320	.0440	.0400
5. Other Index Weight	.1360	.1120	.1080	.1080	.1080	.0160	.0160
6. Malpractice Premiums[g] Index Weight	—	.0160	.0280	.0280	.0280	.0520	.0440
7. Physician Net Income Index Weight	.6000	.6000	.6000	.6000	.6000	.6000	.6000

[a]Taken from Benson L. Dutton Jr. and Peter McMenamin, "The Medicare Economic Index: Its Background and Beginnings," Health Care Financing Review (September 1981) p. 140.

[b]The weights, excluding the malpractice component, were derived from Medical Economics (November 20, 1972) and Profile of Medical Practice (1974 edition). The values are 0.37, 0.14, 0.06, 0.09, and 0.34 for components one through five, respectively. In addition to the above weights, a 40-60% breakdown of gross income between office practice costs and physician's earnings was used.

[c]The weights, including the malpractice component, were derived from Medical Economics (December 8, 1975) and Profile of Medical Practice (1974 edition). The values are 0.37, 0.15, 0.07, 0.09, 0.28, and 0.04 for components one through six, respectively. In addition to the above weights, a 40-60% breakdown of gross income between office practice costs and physician's earnings was used.

[d]The weights, including the malpractice component, were derived from a special study done for HCFA by a consultant in 1977, involving a survey from office based physicians in five specialties. The values are 0.43, 0.10, 0.05, 0.08, 0.27, and 0.07 for components one through six, respectively. In addition to the above weights, a 40-60% breakdown of gross income between office practice costs and physician's earnings was used.

[e]The weights, including the malpractice component, were derived from a special study done for HCFA by a consultant in 1980. The values are 0.44, 0.22, 0.06, 0.11, 0.04, and 0.13 for components one through six, respectively. In addition to the above weights, a 40-60% breakdown of gross income between office practice costs and physician's earnings was used.

[f]The weights, including the malpractice component, were derived from a special study done for HCFA by a consultant in 1981. The values are 0.43, 0.25, 0.07, 0.10, 0.04, and 0.11 for components one through six, respectively.

[g]Derived from a survey of several major insurers.

Table 2[a]

Increase Values of the Components of the Medicare Economic Index[b]

	FSY 1976[c]	FSY 1977[d]	FSY 1978	FSY 1979	FSY 1980	FSY 1981	FSY 1982
1. Physician Employees	1.1682	1.0812	1.0557	1.0550	1.0771	1.0777	1.0968
2. Rental Cost	1.2116	1.1076	1.0624	1.0700	1.0863	1.1229	1.1569
3. Auto Expenses	1.1715	1.0966	1.0988	1.0729	1.0493	1.1489	1.1747
4. Supplies	1.1006	1.1233	1.0585	1.0485	1.0541	1.0763	1.0941
5. Other	1.2176	1.0914	1.0577	1.0645	1.0760	1.1147	1.1346
6. Malpractice Premiums	—	1.8400[e]	1.4170	1.1030	1.0085	0.9210	1.0526
7. Physician Net Income							
a. Gross of Productivity	1.2156	1.0567	1.0729	1.0772	1.0778	1.0766	1.0720
b. Productivity Measure	1.0391	1.0204	1.0326	1.0194	0.9980	0.9920	0.9939
c. Net of Productivity	1.1699	1.0356	1.0390	1.0567	1.0800	1.0853	1.0786

[a]Taken from Benson L. Dutton Jr. and Peter McMenamin, "The Medicare Economic Index: Its Background and Beginnings," Health Care Financing Review (September 1981) p. 140. Prepared by the Division of Medicare Cost Estimates, Office of Financial and Actuarial Analysis, Health Care Financing Administration, April 1981.

[b]Entries are the ratios of the average value of a component for a calendar year to the average value for a preceding calendar year. Data presented are based on 1980 Bureau of Labor Statistics information.

[c]For fee screen year (FSY) 1976, the initial year of MEI implementation increase, values were computed by comparing calendar 1974 values of the components to calendar 1971 values.

[d]For FSY 1977 and all subsequent fee screen years, increase values were computed by comparing the two most recent calendar years preceding the beginning of a fee screen year. For example, FSY 1977 increase values were derived by comparing 1975 data to 1974 data.

[e]The initial increase value for malpractice premiums was derived by comparing 1975 survey data to 1974 data.

and if so, what impact would specialty-linked MEIs have upon Medicare reimbursements.

Specialty-Based Indices

Specialty-based indices for 1978 were developed for each of six specialties: general practice, general surgery, internal medicine, ophthalmology, orthopedic surgery, and anesthesiology. The data used to develop the indices were taken from the 1977 Physician Practice Cost Survey conducted for HCFA by NORC, and specialty-specific information on malpractice premiums supplied by the California Medical Association.

The Physician Practice Cost Survey was a stratified sample of office- and hospital-based physicians. It included 15 office-based specialties and three hospital-based specialties with the physicians categorized into 360 strata based on: (1) the 18 specialties; (2) four geographic regions, and (3) five county-size groups. The survey excluded physicians who spent less than 20 hours per week in the practice, all interns, residents, and full-time members of a medical school faculty, and all practices containing more than nine physicians.

We selected six specialties from the survey: general practice, general surgery, internal medicine, ophthalmology, orthopedic surgery, and anesthesiology. We used the 1977 survey to calculate for each of these specialties, the percentage of total expenditures represented by: (1) physician employee wages; (2) rent; (3) drugs (supplies); (4) other costs; and (5) malpractice insurance. It should be noted that auto expenses, a distinct weight category within the MEI, were not included in the survey except for anesthesiologists. The calculated weights were adjusted to correct for the exclusion of auto expenses and then multiplied by .4, which is their relative value in the MEI.

The change in malpractice insurance premiums was calculated for each specialty as the ratio of specialty-specific changes in malpractice prices to the average change across the five office-based specialties. As previously noted, information on specialty-specific malpractice insurance premiums was supplied by the California Medical Association. It was found that the average change in malpractice premiums between 1976 and 1978 for the five office-based specialties was 714 percent. Within the specialty groups, prices increased by 651 percent for general practitioners, 755 percent for general surgeons, 695 percent for internists, 666 percent for ophthalmologists, 801 percent for orthopedic surgeons, and 833 for anesthesiologists. When taken as the ratio to the average price changes for the five specialties, the following factors result:

	Malpractice Insurance Price Factors
General Practice	0.9118
General Surgery	1.0571
Internal Medicine	0.9734
Ophthalmology	0.9328
Orthopedic Surgery	1.1218
Anesthesiology	1.1666

The increase value for malpractice premiums used in the MEI were 1.8400 for FSY 1977, and 1.4170 for FSY 1978.* The increase value for the entire period was thus 2.6073 or 1.8400 x 1.4170. When the specialty-specific factors computed above are multiplied by the MEI increase values in order to derive specialty-specific increase values, the following factors emerge:

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*The initial increase value for malpractice premiums was derived by comparing 1975 survey data to 1974 data.

Table 3

Derivation of Specialty-Specific Increase Values
for Malpractice Insurance Premiums

		Values Increases
General Practice	(2.6073 x .9118)	2.4348
General Surgery	(2.6073 x 1.0574)	2.8236
Internal Medicine	(2.6073 x .9734)	2.5999
Ophthalmology	(2.6073 x .9328)	2.4908
Orthopedic Surgery	(2.6073 x 1.1218)	2.9956
Anesthesiology	(2.6073 x 1.1666)	3.1152

These price factors were then multiplied by the specialty-specific weights for the MEI malpractice insurance component derived from the 1977 physician practice cost survey to determine the final component weight. The malpractice component weight was then added to the other component weights derived from the physician practice cost survey. Table 4 presents the specialty-specific economic index weights for each of the seven components.

The final result of this analysis is that implementation of specialty-specific economic indices would not significantly alter the existing adjusted prevailings except for anesthesiologists. The major contributing factor in a higher index for anesthesiologists was the much higher malpractice insurance premiums faced by that specialty. Implementation of the specialty-specific indices would involve adjustment of the existing indexed prevailings by the factors shown in Table 5.

Table 4

Specialty-Specific Economic Index Weights

MEI Component	General Practice	General Surgery	Internal Medicine	Ophthalmology	Orthopedic Surgery	Anesthesiology
Physician Employees	0.2339	0.2236	0.2305	0.2275	0.2205	0.1419
Rental Cost	0.1314	0.1386	0.1418	0.1372	0.1458	0.0622
Auto	0.0282	0.0282	0.0282	0.0282	0.0282	0.0796
Supplies	0.0725	0.0361	0.0538	0.0478	0.0479	0.0241
Other	0.0170	0.0183	0.0244	0.0461	0.0223	0.0270
Malpractice	0.1118	0.2132	0.1300	0.1116	0.1815	0.4860
Physician Net Income	0.7553	0.7553	0.7553	0.7553	0.7553	0.7553
Total	1.3463	1.4092	1.3603	1.3498	1.3978	1.5715

Table 5

Final Adjustment Factors for Existing Indexed Prevailings Resulting from Implementation of Specialty-Specific Economic Index Factors

General Practice	0.9923
General Surgery	1.0387
Internal Medicine	1.0026
Ophthalmology	0.9949
Orthopedic Surgery	1.0303
Anesthesiology	1.1583

Thus, our general findings are that implementation of a specialty-specific economic index would not significantly alter existing indexed prevailings for general practitioners, internists, or ophthalmologists. For the remaining three specialties, indexed prevailings would rise by 3 percent for orthopedic surgeons, 3.9 percent for general surgeons, and 16 percent for anesthesiologists.

Table 6 presents the estimated distribution of physicians by percentage change in 1978 program costs after implementation of the specialty-specific economic index. As expected, the largest increase in program costs is observed among anesthesiologists with 82.14 percent of all physicians providing services with program cost increases exceeding 15 percent. The next largest increase is observed among orthopedic surgeons, with 83.79 percent of the physicians in that specialty providing services representing a 1 to 5 percent increase in program costs. Approximately 78.56 percent of all general surgeons fall into that same category. The largest declines are observed among general practitioners with roughly 34 percent of all GPs providing services with a 1 to 5 percent decline in total program costs.

Table 6

Distribution of Physicians by Percentage Change in 1978 Medicare Program Expenditures Resulting from Implementation of Specialty-Specific Economic Indices

Specialty	Percentage Change in Program Costs					
	1% to 5% Decline	No Change	1% to 5% Increase	6% to 10% Increase	11% to 15% Increase	Greater than 15% Increase
General Practice	33.94%	66.06%	0.00%	0.00%	0.00%	0.00%
General Surgery	0.00	21.44	78.56	0.00	0.00	0.00
Internal Medicine	0.00	100.00	0.00	0.00	0.00	0.00
Ophthalmology	6.78	93.22	0.00	0.00	0.00	0.00
Orthopedic Surgery	0.00	16.21	83.79	0.00	0.00	0.00
Anesthesiology	0.00	5.61	4.59	1.02	6.63	82.14

Percentile Floor for Indexed Prevailing

This subtask examined the impact of an additional alteration of the indexed prevailing. This analysis involved calculation of the 50th percentile of 1977 area-specialty customary charges for each of the most frequently performed procedures. These 50th percentile charges were then used as a "floor" in determining 1978 prevailing charge levels. The new prevailing was determined in the following manner:

$$\text{New LVII} = \max (\text{50th Pctile LVII}_{ijk}, \text{ADJLVII}_{ijk})$$

where:

$\text{50th Pctile LVII}_{ijk}$ = 50th percentile of 1977 area-specialty customary charges for procedure i for specialty j in PSRO k

ADJLVII_{ijk} = existing adjusted (indexed) prevailing for procedure i for specialty j in PSRO k.

The new prevailing was calculated for the most frequently performed procedures for the five standard specialties and anesthesiologists. The new prevailings were then used to calculate new program costs set as:

$$\text{New Prog Cost}_{ij} = .8 * \min (\text{ABA}_{ij}, \text{LVI}_{ij}, \text{New LVII}_{ij}) * \text{NSVCS}_{ij}$$

where:

ABA_{ij} is the average billed amount for procedure i and physician j

LVI_{ij} is the 1978 customary charge for procedure i and physician j

New LVII_{ij} is the new adjusted prevailing for procedure i and physician j (varies only according to specialty and PSRO)

and

$NSVCS_{ij}$ is the number of services performed by physician i for procedure j.

Table 7 presents the results of this simulation. It displays the percentage distribution of physicians by the respective percentage change in program costs caused by implementation of a 50th percentile floor in prevailing charges.

Once again, anesthesiologists experience the greatest increase in program charges. Nearly 68 percent of all anesthesiologists had cost increases in excess of 15 percent. Among the remaining specialties, increases were generally in the 1 to 5 percent range. Ophthalmologists and internists were relatively unaffected by the introduction of a prevailing floor, with 88 percent and 84 percent respectively, of such physicians experiencing no change in program costs.

Table 7

Percentage Distribution of Physicians by Percentage Change in 1978 Medicare Program Costs Caused by Implementation of a 50th Percentile Floor on Prevailing Charges

		Percentage Increase			
	No Change	1% to 5%	6% to 10%	11% to 15%	Over 15%
General Practice	77.43	21.66	0.82	0.09	0.00
General Surgery	51.55	41.08	6.71	0.65	0.00
Internal Medicine	83.86	15.82	0.32	0.00	0.00
Ophthalmology	88.14	9.75	1.27	0.42	0.42
Orthopedic Surgery	51.38	43.48	4.35	0.79	0.00
Anesthesiology	5.61	8.67	2.04	15.82	67.86